

Remarks

The above amendments and these remarks are responsive to the Office Action mailed August 24, 2005. Applicants thank the Examiner for carefully considering the subject application. With entry of this amendment, claims 1-21 are pending. No new matter has been added by these amendments.

§ 101 Rejections

First, applicants respectfully traverse the provisional rejection of claims 1-21 under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-11, 13 and 19-26 of copending Application No. 10/647,357 ("the '357 application"). The MPEP states that "a reliable test for double patenting under 35 U.S.C. § 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the other application." MPEP § 804(II)(A) (citing In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970)).

The provisional rejection of claims 1-12 is improper under 35 U.S.C. § 101 at least for the reason that these claims could not be literally infringed while literally infringing a claim of the '357 application. Claim 1 of the present application as amended recites, in part, "a plurality of vanes disposed upstream of an exhaust pipe outlet, said vanes extending from an inner surface of said exhaust pipe and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses passing through said exhaust pipe outlet to reduce noise at said exhaust pipe outlet."

In contrast, amended claim 1 of the '357 application as amended reads, in part, "a plurality of vanes extending from an inner surface of said exhaust pipe and spaced apart from one another and disposed upstream of a discontinuity of said exhaust pipe, said vanes being oriented generally parallel to a direction of flow of said exhaust gas pulses and configured to

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reduce turbulence in said exhaust gas pulses flowing past said vanes to reduce noise generated at said exhaust pipe discontinuity.”

Given the differences between these two claims, an apparatus comprising a plurality of vanes disposed upstream of a discontinuity other than an exhaust pipe outlet may literally infringe claim 1 of the ‘357 application, but may not infringe claim 1 of the present application. Therefore, under Vogel, claim 1 of the present application and claim 1 of the ‘357 application do not claim the same invention under 35 U.S.C. § 101. Furthermore, dependent claims 2-12 of the present application include all of the elements of claim 1, and therefore also do not claim the same invention as claims 1-11, or any other claims, of the ‘357 application. For at least these reasons, the statutory double patenting rejection of claims 1-12 is improper, and should be withdrawn.

Next, the provisional rejection of claim 13 under 35 U.S.C. § 101 is also improper for at least the reason that claim 13, and dependent claims 14-20, could not be literally infringed while literally infringing claim 13 of the ‘357 application. Claim 13 as amended herein reads, in part, “an air diffuser disposed upstream of an outlet of said exhaust pipe, said diffuser having an outer wall defining an internal bore communicating with said exhaust pipe, said diffuser further including a plurality of vanes extending from said wall and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses exiting said exhaust pipe outlet to reduce noise at said exhaust pipe outlet.”

In contrast, claim 13 of the ‘357 application reads, in part, “an air diffuser disposed upstream of a discontinuity of said exhaust pipe, said diffuser having an outer wall defining an internal bore communicating with said exhaust pipe, said diffuser further including a plurality of vanes extending from said wall and spaced apart from one another, said vanes being oriented

generally parallel to a direction of flow of said exhaust gas pulses and configured to reduce turbulence in said exhaust gas pulses flowing past said vanes to reduce noise at said exhaust pipe discontinuity.”

Given the differences between claim 13 of the present application and claim 13 of the ‘357 application, an air diffuser located upstream of a discontinuity other than an exhaust pipe outlet may literally infringe claim 13 of the ‘357 application, but may not infringe claim 13 of the present application. Therefore, claim 13 of the present application and claim 13 of the ‘357 application do not claim the same invention under § 101. Furthermore, dependent claims 14-20 of the present application include all of the elements of claim 13, and therefore also do not claim the same invention as any of claims 13 or 19-25 (or any other claims) of the ‘357 application. Therefore, for at least these reasons, the statutory double patenting rejection of claims 13-20 is improper and should be withdrawn.

Next, the provisional rejection of independent claim 21 of the present application is also improper under 35 U.S.C. § 101. Claim 21 as amended herein reads, in part, “flowing said exhaust gas pulses through a plurality of vanes extending from an inner surface of said exhaust pipe to reduce turbulence in said exhaust gases flowing past said vanes and out of a downstream outlet of said exhaust pipe to reduce noise at the downstream outlet of said exhaust pipe.”

In contrast, independent claim 26 of the ‘357 application as amended reads, in part, “flowing said exhaust gas pulses through a plurality of vanes extending from an inner surface of said exhaust pipe in an orientation generally parallel to a flow of said exhaust gas pulses to reduce turbulence in said exhaust gases flowing past said vanes to reduce noise generated at a downstream discontinuity in said exhaust pipe.”

Given the differences between claim 21 of the present application and claim 26 of the '357 application, flowing exhaust gas pulses through a plurality of vanes located upstream of a discontinuity other than an exhaust pipe outlet may literally infringe claim 26 of the '357 application but would not literally infringe claim 21 of the present application. Therefore, claim 21 of the present application and claim 26 of the '357 application do not claim the same invention under § 101. For at least this reason, the statutory double patenting rejection of claim 21 is improper and should be withdrawn.

§ 102 Rejections

Applicants respectfully traverse the rejection of claim 1 as anticipated by Nakase et al. Claim 1 is not anticipated by Nakase because Nakase does not disclose all of the elements of claim 1. Nevertheless, applicants herein amend claim 1 to recite "a plurality of vanes disposed upstream of an exhaust pipe outlet, said vanes extending from an inner surface of said exhaust pipe and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses passing through said exhaust pipe outlet to reduce noise at said exhaust pipe outlet."

In contrast, Nakase does not disclose, for example, vanes configured to reduce turbulence in said exhaust gas pulses passing through said exhaust pipe outlet to reduce noise at said exhaust pipe outlet. Instead, Nakase discloses an apparatus for preventing flow noise associated with a throttle valve. All embodiments of the apparatus of Nakase are disclosed as being located at the downstream side of a throttle valve. For example, Nakase discloses at col. 2, ll. 41-59, that "the present invention either provides a pair of means for imparting resistance to flows . . . at the downstream side of the throttle valve . . . or otherwise provides, at the downstream side of at least one of the pair of clearances, a means for acting on the flow of air passing through the

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clearance” For at least this reason, amended claim 1 is not anticipated by Nakase, and is in condition for allowance. Furthermore, dependent claims 6, 7 and 9-12 include all of the elements of independent claim 1, and are therefore not anticipated by Nakase for at least the same reasons as claim 1.

Likewise, applicants also respectfully traverse the rejection of claim 1 as anticipated by Kim. Kim discloses, at col. 3, ll. 59-64, an air swirling device positioned at the exhaust manifold entrance for preventing backpressure. Kim does not disclose vanes configured to reduce turbulence in said exhaust gas pulses passing through said exhaust pipe outlet to reduce noise at said exhaust pipe outlet. For at least this reason, amended claim 1 is not anticipated by Kim. Furthermore, dependent claims 3 and 5 include all of the elements of independent claim 1, and are therefore not anticipated by Kim for at least the same reasons as claim 1.

Next, applicants respectfully traverse the rejection of claim 13 as anticipated by Nakase and Kim. Nevertheless, applicants herein amend claim 13 to recite an air diffuser disposed upstream of an outlet of said exhaust pipe, said diffuser having an outer wall defining an internal bore communicating with said exhaust pipe, said diffuser further including a plurality of vanes extending from said wall and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses exiting said exhaust pipe outlet to reduce noise at said exhaust pipe outlet. In contrast, as described above for claim 1, Nakase and Kim do not disclose vanes configured to reduce turbulence in exhaust gas pulses exiting an exhaust pipe outlet. For at least this reason, claim 13 is not anticipated by Nakase or Kim. Furthermore, claims 15, 17, 18 and 20 depend from and include all of the elements of claim 13, and are therefore also not anticipated by Nakase or Kim for at least the same reasons as claim 13.

Applicants also respectfully traverse the rejection of claim 21 as anticipated by Nakase and Kim. Claim 21 as amended recites flowing said exhaust gas pulses through a plurality of vanes extending from an inner surface of said exhaust pipe to reduce turbulence in said exhaust gases flowing past said vanes and out of a downstream outlet of said exhaust pipe to reduce noise at the downstream outlet of said exhaust pipe. In contrast, as described above for claim 1, neither Nakase nor Kim discloses flowing exhaust gas pulses through a plurality of vanes extending from an inner surface of said exhaust pipe to reduce turbulence in said exhaust gases flowing past said vanes and out of a downstream outlet of said exhaust pipe. For at least this reason, claim 21 is not anticipated by Nakase or Kim.

§ 103 Rejections

Applicants respectfully traverse the rejection of claims 2, 4, 8, 14 and 19 under 35 U.S.C. § 103(a) as obvious over Nakase or Kim for at least the reason that neither Nakase nor Kim, alone or in combination, discloses or suggests all of the elements of any of these claims.

First, claims 2, 4 and 8 depend from and include all of the elements of claim 1. As described above, neither Nakase nor Kim discloses, for example, the element of claim 1 of a plurality of vanes disposed upstream of an exhaust pipe outlet, said vanes extending from an inner surface of said exhaust pipe and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses passing through said exhaust pipe outlet to reduce noise at said exhaust pipe outlet. Nakase and Kim also do not suggest this element. Kim addresses only the problem of backpressure at an exhaust manifold entrance, and therefore fails to recognize the problem of noise at an exhaust pipe outlet. Nakase likewise recognizes only the problem of noise from the convergence of air downstream of a throttle valve, and not the problem of noise at an exhaust pipe outlet. Furthermore, Nakase discloses solving its recognized

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problem via means located *downstream* of the throttle valve, which would not work with an exhaust pipe outlet. Therefore, both Kim and Nakase fail to disclose or suggest all of the elements of claim 1, and thus of dependent claims 2, 4 and 8.

Next, claims 14 and 19 depend from and include all of the elements of claim 13. As described above, neither Nakase nor Kim discloses, for example, the element of claim 13 of an air diffuser disposed upstream of an outlet of said exhaust pipe, said diffuser having an outer wall defining an internal bore communicating with said exhaust pipe, said diffuser further including a plurality of vanes extending from said wall and spaced apart from one another, said vanes configured to reduce turbulence in said exhaust gas pulses exiting said exhaust pipe outlet to reduce noise at said exhaust pipe outlet. Furthermore, neither Nakase nor Kim suggests this element. As described above, Kim addresses only the problem of backpressure at an exhaust manifold entrance. Nakase likewise recognizes only the problem of noise from the convergence of air downstream of a throttle valve, and not the problem of noise at an exhaust pipe outlet. For at least these reasons, the rejection of claims 2, 4, 8, 14 and 19 as obvious over Nakase or Kim is improper, and should be withdrawn.

New Claims

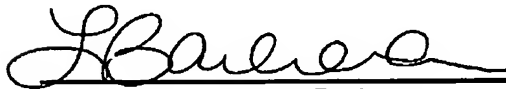
Applicants herein present new claims 22-24 for consideration.

Based on the foregoing comments, the above-identified application is believed to be in condition for allowance, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is respectfully requested to contact the undersigned by fax or telephone at the number listed below.

Please charge any cost incurred in the filing of this Amendment, along with any other costs, to Deposit Account No. 06-1510. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1505.

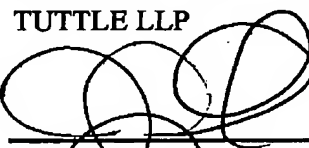
CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being sent via facsimile to the U.S. Patent and Trademark Office at (571) 273-8300 on November 14, 2005.



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